Re: Prior uterine evacuation of pregnancy as independent risk factor for preterm birth: a systematic review and metaanalysis

TO THE EDITORS: The meta-analysis by Dr Saccone and colleagues[1] concludes that surgical abortion "is an independent risk factor" for subsequent preterm birth. The authors found a weak association (odds ratios [OR], 1.44; 95% confidence interval, 1.09−1.90) between abortion and preterm birth, but we question whether this association is causal. We agree with the discussion of study limitations and will highlight several key points. First, the reported associations all had OR <2. Not only do bias and confounding often account for weak associations, but OR exaggerate true relative risk.[2] Second, most studies included failed to adjust for important known confounders such as prior preterm birth, race, smoking, and short interpregnancy interval. Third, many studies had case-control designs, and recall bias has been shown to have a powerful impact in case-control studies of abortion, exaggerating negative outcomes of abortion.[3]

Even if some of the reported association is causal, the attributable risk of preterm birth following abortion is very small. When women continue unintended pregnancies, however, they may be at increased risk of preterm birth in that pregnancy. One systematic review found an association between unwanted pregnancies and preterm birth with an OR magnitude similar to the findings presented here (OR, 1.50; 95% confidence interval, 1.41−1.61).[4] When women gained access to safe abortion in Oregon, a decrease in preterm birth and neonatal mortality were observed.[5] Access to abortion also has clear social and economic benefits for women and families,[6,7] likely affecting future pregnancy outcomes and preterm births.

The data presented are insufficient to support counseling women that abortion is a risk factor for preterm birth or to warrant the large and expensive randomized trials to further evaluate this association as proposed by the authors. We suggest funding would be better spent on interventions known to prevent preterm birth: prenatal care, contraception, and smoking cessation, for example. ■

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REPLY

We thank Dr Averbach et al for their interest in our study. As we have highlighted in our article[1] and in prior letters,[2,3] we completely agree that we have found a weak association (odds ratio <2) between abortion and preterm birth and acknowledge the high risk of bias of the included studies. Most of the included studies did not control appropriately for confounders, and only 6 included parity, an important determinant of preterm delivery,[4] as a potential confounder. Moreover, because women face stigma when reporting an induced abortion, patients in the case or control group could have omitted abortion from their medical history, which would lead to a high risk of recall bias.[1]

Dr Averbach et al also cited a possible association between unintended pregnancies and preterm birth.[5] They stated that "when women gained access to safe abortion…a decrease in preterm birth and neonatal mortality were observed." We agree with this statement, as the social risk factors associated with preterm birth are the same risk factors associated with

unintended pregnancies. In our article, we did not conclude that abortion is a risk factor for preterm delivery, but that prior surgical uterine evacuation could be.[1] Indeed, we also found that women with prior medical abortion had a similar risk of spontaneous preterm birth compared with controls (28.2% vs 29.5%).[1] Counseling women that, based on the available evidence, however poor, surgical uterine evacuation either for miscarriage or abortion may be an independent risk factor for preterm birth, may give women additional information when making a decision regarding medical or surgical management of unintended pregnancy or early pregnancy loss. Perhaps most importantly, the description of cervical preparation before uterine evacuation was limited, but cervical ripening (eg, with misoprostol) may indeed prevent any small increase in preterm birth associated with these procedures.[1] Moreover, as there were no randomized controlled trials (RCTs) included in our meta-analysis, and no studies comparing prior medical with prior surgical abortion, we still call for future large clinical RCTs with long-term follow-up comparing surgical versus medical evacuation of the uterus.

We strongly believe that physicians and researchers should always be encouraged to practice based on the highest level of evidence, which comes from RCTs and meta-analyses of RCTs.[6]

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